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RCMP DETACHMENTS - British  
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# FleetSmart PROFILES

## RCMP DETACHMENTS — BRITISH COLUMBIA

*Using Alternative Fuels  
to Reduce Fleet  
Operating Costs*

Three Royal Canadian Mounted Police (RCMP) detachments in British Columbia have converted their patrol cars to operate on propane. The detachments report significant fuel-cost savings and excellent driver acceptance of the alternative fuel.



### About the fleet

The RCMP's fleet in British Columbia consists of more than 2 500 vehicles, many of which have eight-cylinder engines. The vehicles are used primarily for general policing duties and highway patrol. General-duty vehicles are driven an average of 3 000 to 5 000 kilometres per month, while highway patrol vehicles average anywhere from 6 000 to 12 000 kilometres per month.

Fuel costs are a major expense for the RCMP's 200 detachments in British Columbia, so much so that in the early 1980s, some detachments began to explore less expensive alternatives to gasoline. At that time, the detachments at Fort St. John and Dawson Creek, in northern B.C., began converting their patrol vehicles

service



to propane (support vehicles are not converted unless their annual mileage is higher than average).

Many of the conversions have been bi-fuel (gasoline or propane) configurations that retain the capability to use gasoline and therefore offer the advantage of extended range, which is necessary in some detachments. For example, RCMP vehicles operating out of Fort St. John may travel up to 12 hours in one direction to reach some parts of the detachment area, so it's important to have gasoline available as a backup to propane. However, officers are expected to use propane whenever possible in order to achieve the maximum cost savings. Where vehicle range is not a major consideration, some of the vehicles have been converted to operate on propane only.

In 1993, the Langley detachment began a conversion program and now have 20 vehicles operating on single fuel propane.

### **Propane: widely available and inexpensive**

Propane is a logical choice as an alternative transportation fuel in B.C. for two reasons: it is readily available throughout the province, and it is inexpensive compared to gasoline.

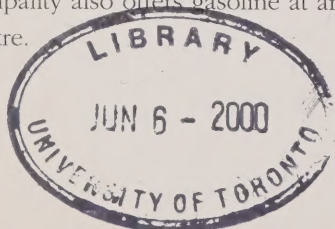
"It was strictly a matter of dollars and cents," says Corporal Beaton of the Dawson Creek detachment. "Propane offers substantial savings."

Retail propane prices in B.C. range from \$0.18 to \$0.24 per litre, while gasoline typically sells for \$0.54 to \$0.69 per litre. The Langley detachment buys its propane fuel from the municipality at a wholesale cost of \$0.12 to \$0.13 per litre. The municipality also offers gasoline at an average price of \$0.50 per litre.

### *Conversion payback in four to six months*

Conversions for the Langley detachment are performed by the Langley municipal garage at a cost of about \$2,300, compared to up to \$2,600 paid by the other two detachments. Conversions usually take three days to complete.

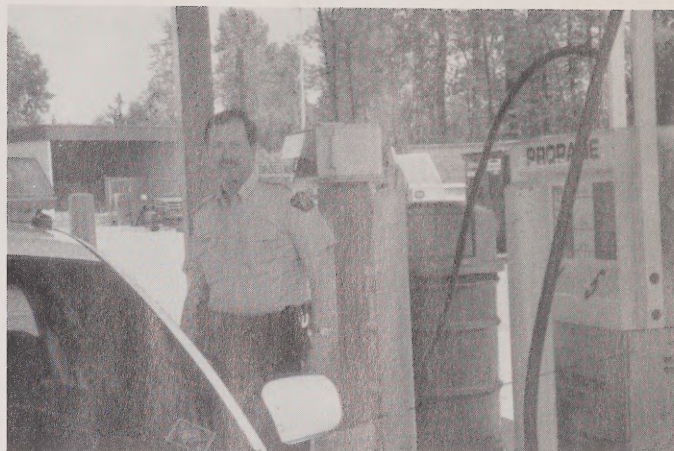
A study prepared for the Langley detachment found that it was significantly more expensive to operate an identical vehicle on gasoline than on propane. In the case of propane, Langley's fuel cost was \$0.034 per kilometre, compared to \$0.087 per kilometre





the use of propane in 20 of its vehicles has saved about \$100,000 in fuel costs since 1993. In the Fort St. John and Dawson Creek detachments, payback of the conversion cost is also achieved within four to six months.

for gasoline. Based on the average annual distance travelled by an RCMP vehicle in Langley (70 000 kilometres), the total fuel-cost saving using propane is estimated to be \$3,920. Even when the conversion cost of \$2,300 is taken into account, this still represents a first-year saving of \$1,620. The detachment estimates that



## Strong driver support

All three detachments report that the RCMP officers who drive the converted patrol cars are very supportive of the switch to propane, although there was some early resistance to the new fuel.

"Drivers who were comfortable with gasoline cars initially had a negative view of propane," explains Si Coleman of the Langley detachment. "It was a matter of getting accustomed to the propane vehicles."

In northern B.C., acceptance of propane is so strong that many officers have had their personal vehicles converted to this proven alternative fuel.

## Good vehicle performance and reduced maintenance

At the remote Dawson Creek detachment, potential problems with cold-weather starting during the winter have been avoided by switching the fuel supply to gasoline before shutting off the engine. Gasoline is then used to restart the

engine, before switching back to propane. In Langley, the detachment has noticed that fewer oil changes are required and that spark plugs do not have to be replaced as often in the vehicles that operate on propane.

"Our oldest car has been driven 130 000 kilometres, and it starts every day," says Mr. Coleman. "With otherwise identical vehicles, one propane and the other gasoline, there is about a ten per cent reduction in engine power with propane."

Although there was initially some concern about the effect of the combined weight of full propane and gasoline tanks, experience has shown that it does not cause problems.

"There is no difference in the handling," says Corporal Greep of the Fort St. John detachment in comparing the gasoline only and bi-fuel vehicles.

The structural integrity and safety of the mono-fuel propane and bi-fuel vehicles has also been excellent.

"Several police cars have been in accidents, but there was no problem," says Mr. Hughes, Fleet Manager for the Municipality of Langley. "The propane systems are very safe."

Considering the diverse and often difficult driving conditions for police vehicles in British Columbia, propane has proven to be a reliable and affordable alternative fuel, in both urban and remote locations.



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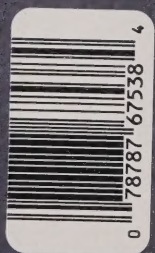
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